

What is claimed is:

1. A carrier core material for an electrophotographic developing agent, comprising ferrite particles containing

5 a ferrite component represented by the following formula (A):



wherein x, y and z are each expressed in % by mol and are numbers satisfying the conditions of $40 \leq x \leq 60$, $0.1 \leq y \leq 10$

10 and $x+y+z=100$, and

ZrO_2 in an amount of 0.01 to 5.0 parts by weight based on 100 parts by weight of the ferrite component, said ZrO_2 not forming a solid solution with the ferrite component,

15 wherein the carrier core material has a magnetization, at $1000(10^3/4\pi \cdot \text{A/m})$, of 65 to $85 \text{ Am}^2/\text{kg}$ and an electrical resistance, at an applied voltage of 1000 V, of 10^5 to $10^9 \Omega$.

20 2. The carrier core material for an electrophotographic developing agent as claimed in claim 1, wherein the ferrite particles further contain Bi_2O_3 in an amount of 0.1 to 5.0 parts by weight.

3. The carrier core material for an electrophotographic developing agent as claimed in claim 1 or 2, wherein the surfaces of the ferrite particles have been oxidized.

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4. The carrier core material for an electrophotographic developing agent as claimed in claim 3, wherein the ferrite particles having oxide layers on their surfaces have an electrical resistance, at an
10 applied voltage of 1000 V, of 10^6 to 10^{12} Ω .

5. A coated carrier comprising:

a carrier core material which comprises ferrite particles containing

15 a ferrite component represented by the following formula (A):



wherein x, y and z are each expressed in % by mol and are numbers satisfying the conditions of $40 \leq x \leq 60$, $0.1 \leq y \leq 10$

20 and $x+y+z=100$, and

ZrO_2 in an amount of 0.01 to 5.0 parts by weight based on 100 parts by weight of the ferrite component, said ZrO_2 not forming a solid solution with the ferrite component, and

a resin coating layer formed on the surface of the core material,

wherein the coated carrier has a magnetization, at $1000(10^3/4\pi \cdot A/m)$, of 65 to 85 Am^2/kg and an electrical resistance, at an applied voltage of 1000 V, of not less than $10^7 \Omega$.

6. The coated carrier as claimed in claim 5, wherein the ferrite particles further contain Bi_2O_3 in an amount of 0.1 to 5.0 parts by weight.

7. The coated carrier as claimed in claim 6, wherein the ferrite particles have oxide layers on their surfaces and have an electrical resistance, at an applied voltage of 1000 V, of 10^6 to $10^{12} \Omega$.

8. The coated carrier as claimed in any one of claims 5 to 7, wherein the carrier core material is coated with a resin in an amount of 0.01 to 10 parts by weight based on 100 parts by weight of the carrier core material.

9. The coated carrier as claimed in any one of claims 5 to 8, having an electrical resistance, at an applied voltage of 1000 V, of 10^7 to $10^{13} \Omega$.

5 10. The coated carrier as claimed in any one of claims 5 to 8, wherein the coated carrier has an average particle diameter of 20 to 50 μm and a 635-mesh passing ratio of not more than 10% by weight.

10 11. The coated carrier as claimed in any one of claims 5 to 10, having a residual magnetization (M_r), at 1000 ($10^3/4\pi \cdot \text{A/m}$), of not more than 5 Am^2/kg , and a coercive force (H_c) of not more than 20 ($10^3/4\pi \cdot \text{A/m}$).

15 12. A two-component developing agent for electrophotography, comprising the coated carrier of any one of claims 5 to 11 and toner particles having an average particle diameter of 3 to 15 μm .

20 13. An image forming method comprising developing an electrostatic latent image formed by the use of an alternating electric field, with the two-component developing agent for electrophotography of claim 12.